

Atlantic Richfield Company

Jack Oman
Project Manager

4 Centerpointe Drive
LaPalma, CA. 90623-1066
(714) 228-6774 office
(714) 670-5195 fax
jack.oman@bp.com

February 8, 2012

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Jere Johnson
Remedial Project Manager
U.S. Environmental Protection Agency Region 9
75 Hawthorne Street, SFD-9-1
San Francisco, CA 94105

Subject: January 2012 Monthly Report, Yerington Mine Site, Lyon County, Nevada: Administrative Order for Remedial Investigation and Feasibility Study (RI/FS), CERCLA Docket No. 9-2007-0005; Administrative Order on Consent, CERCLA Docket No. 09-2009-0010

Dear Ms. Johnson:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared this January 2012 monthly report for RI/FS and Operations and Maintenance (O&M) activities at the Yerington Mine Site (Site).

January 2012 Activities

Site Security and O&M Activities

- Continued routine Site O&M, security and bird deterrent activities. Security cameras at various locations (e.g., Main and Arimetco gates, entrances to buildings) indicated no activity of concern.
- “Wind Dancers” were active at the Slot Pond, the Pumpback Well System (PWS) Pond, and the Lined Evaporation Pond. Operation of the propane cannons for the Arimetco Fluid Management System (FMS) ponds (with the exception of the VLT Pond, as directed by EPA). Locations of “Wind Dancers” and bird deterrent flags were rotated every two weeks, or as field observations dictated, to lessen the possibility of birds becoming habituated to these deterrents. The bird guard towers remained active due to water in the PWS Pond. Start/stop times on all cannons continued to be adjusted.
- Water levels in PWS Evaporation Pond cells: North Cell = 0.0 feet; Middle Cell = 1.5 feet; South Cell = 3.2 feet (water in the two cells primarily resulted from the aquifer test).
- Arimetco FMS pond levels: Phase 1 Pond = 3.52 feet; FMS Evaporation Pond = 8.10 feet; VLT Pond = 8.97 feet; Slot 2 Pond = 13.50 feet. No fluid transfers occurred in January. See attached monitoring data.
- In a letter dated January 11, 2012, ARC requested that EPA approve a maximum operating fluid level in the FMS Evaporation Pond of nine (9) feet, which result would result in a one-foot freeboard, to provide more FMS storage capacity through 2012. EPA approved the increase on January 11. The results of a detailed topographic survey of the FMS Evaporation Pond perimeter conducted on January 10 indicated that additional storage capacity can be achieved with a one-foot freeboard (i.e., the 9-foot level turned out to be above the mark indicated on the pond liner). With the increase in maximum operating fluid level, the additional storage capacity in the FMS Evaporation Pond was estimated at approximately 1.5 million gallons.

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January 2012 Activities - Continued

Site Security and O&M Activities - Continued

- Leak detectors were monitored throughout the Site, and approximately 26,215 gallons of solution were pumped in January. The VLT Pond leak detector remained inactive until January 20, when it started to report approximately 3 gallons per day (gpd), likely due to the fluid level reaching a small tear or opening in the primary liner. On January 27, VLT leak detector activity increased up to approximately 330 gpd, as the rising fluid level likely reached a larger tear or opening. See attached monitoring data.
- On January 3, EPA approved the VLT Transformer Soils Characterization and Removal Work Plan dated December 30, 2011. Sampling of the soil was completed on January 10 and it was confirmed that it contained non-volatile hydrocarbons and no PCBs. The stained soil and cement pad were excavated to a depth of approximately 12 to 18 inches, and containerized on January 18. A confirmation sample was collected from the base of the excavation on January 30.
- On January 19, during debris clean-up in the Process Areas associated with sub-surface utility investigations, a truck accidentally struck a 4-inch HDPE pipeline that caused the line to rupture. The non-pressurized pipeline conveys weakly acidic (4.0 pH) HLP drain-down fluids by gravity from the Phase III 4X HLP to the 14-inch main that discharges to the FMS Evaporation Pond. Approximately 480 gallons of fluid leaked at rates from 10 to 2 gpm (visual estimates), and traveled approximately 20 feet to a topographically low spot where the fluids ponded. The duration of the leak was approximately 2 hours, and the flow rate diminished over time. The initial response consisted of: 1) closing off nearby valves; 2) pumping of approximately 250 gallons of ponded fluids into a portable tank for containment; 3) spreading sand over the low spot to help absorb fluids that could not be pumped; and 4) disposing of the fluids pumped from the low spot in the Phase I Pond. The 4-inch line was then repaired and surrounded by safety fencing.

Other Site Activities

- Singatse Peak Services personnel continued to make improvements to the warehouse, truck shop, and other structures.
- B.V. Nevada personnel continued with their demolition and salvage activities.
- Site O&M personnel continued to paint bollards, and installed additional stakes and reflectors along roadways, to improve Site safety conditions.
- Continued Site wildlife surveys and wildlife observation reports.

Site Characterization Activities

- Monthly groundwater elevation measurements were obtained January 24-26.
- A pit lake water elevation of 4227.0 feet amsl was recorded on January 24, 2012 from the pressure transducer, an increase of 0.50 feet since December 24, 2011. The pit lake elevation has risen 3.50 feet since January 24, 2011.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation. Semi-annual calibration of the Site meteorological station.
- No residences were added to the Domestic Well Sampling Program.
- No residences were added to the Bottled Water Program.
- Participated in a conference call on January 4 with EPA to discuss the Site-Wide Groundwater Monitoring Plan - Revision 1 (GMP), and the 1Q and 2Q 2011 Groundwater Monitoring Report (GMRs). Submitted final responses to EPA comments on the GMP and GMRs on January 24.
- Continued data compilation for inclusion in the Annual 2011 GMR and the Annual 2011 Domestic Well Monitoring Report (DWMR).
- Completed the deployment of pressure transducers/data loggers for electronic water level monitoring pursuant to EPA approval of ARC's letter entitled 2012 Deployment of Pressure Transducers dated November 22, 2011. Dedicated bladder pumps were installed, and pressure transducers re-installed, in Yerington Paiute Tribe monitor wells 9, 11, 12 and 14.

January 2012 Activities – Continued

Site Characterization Activities-Continued

- Continued field and laboratory investigations associated with the On-Site Monitor Well Installation Work Plan. Monitor well B/W-75B was installed. The following wells were developed: PLMW-1B, PLMW-3B, PA-MW-7S, B/W-70S, B/W-70I, B/W-70D2, B/W-71I, B/W-71B, B/W-74I2, B/W-74D1, B/W-74B, B/W-76S, B/W-76I, WRA3-2 and WRA 3-3. Zonal Samples were collected from B/W-56, -57 and -58. Slug testing commenced on January 16. Surveying of new monitor wells started on January 17. Installation of dedicated bladder pumps started on January 31. See the attached summary for more detailed information.
- Continued data management and evaluation activities associated with the Aquifer Test Work Plan including: 1) the evaluation of hydrograph data for specific aquifer response models; 2) curve-matching for the evaluation of aquifer properties; and 3) detailed assessment of anomalous response data for potential external influences and equipment-related issues.
- Continued the preparation of draft responses to EPA comments on the 2010 Monitor Well and Agricultural Field Characterization Data Summary Report (2010 DSR) dated August 12, 2011. Initiated revisions to the DSR per EPA comments.
- Submitted a letter dated January 5, 2012 to EPA that describes proposed initial bedrock well characterization activities at the Site. The approach to bedrock well characterization was discussed with EPA in a groundwater technical meeting in August 2011, and included in EPA's cover letter dated September 29, 2011 with attached comments on the GMP and GMRs.
- Submitted a technical memorandum dated January 5, 2012 to EPA that describes publically available information (underground and surface water rights; groundwater elevation data) in an area northeast of the Site that may be included in the groundwater operable unit study area for background conditions. This technical memorandum was requested by EPA in a groundwater technical meeting in August 2011.
- Continued to develop Standard Operating Procedures (SOPs) for Aquifer Solids Testing, and coordinated with EPA on these SOPs.
- Continued to prepare components of the revised Site-Wide Groundwater Operable Unit (OU-1) Remedial Investigation Work Plan due for submittal during the second quarter of 2012 including appendices related to calculation of soil-water partition coefficients, surface water data and hydrologic tracer data.
- Completed the identification of sub-surface features in the Truck Shop, Sulfide Plant and Truck Wash/Paint Shop as part of the Process Areas (OU3) Sub-Surface Utility and Dry Well Investigation. Identified a previously unknown dry well located on the south edge of the foundation of the Truck Wash/Paint Shop. Removed TPH-impacted materials from sumps: 5 drums of oily sediment from the sump located northeast of the Truck Shop; 2.5 drums of oily water from the grease pit inside the Truck Shop; and 3 drums of oil-impacted soil from the sump located within the foundation of the Truck Wash/Paint Shop. Oversight was provided by EPA's contractor (CH2M Hill).
- Modified the project database in accordance with GMP and GMR comments provided by EPA regarding units to be used in annual and quarterly reports, and in data summary reports. Routine database management activities.

Planned February/March 2012 Activities

Site Security and O&M Activities

- Continue routine Site O&M, security and bird deterrent activities.
- Transfer fluids from the VLT Pond to the FMS Evaporation Pond to reduce or eliminate leak detector activity associated with the VLT Pond.
- Pending lab analytical results for the confirmation sample, the excavation associated with the former VLT Transformer will be backfilled, and the impacted soil and concrete slab materials will be shipped off-Site to an approved landfill.

Planned February/March 2012 Activities - Continued

Site Security and O&M Activities - Continued

- Submit the Data Summary Report pursuant to the VLT Transformer Soils Characterization and Removal Work Plan.
- Continue discussions with EPA and SPS regarding FMS improvements.

Other Site Activities

- Continue the compilation of aerial survey-based photos and maps.
- Continue Site wildlife surveys, maintenance of wildlife observation data and preparation of wildlife observation reports.

Site Characterization Activities

- Continue groundwater elevation and pit lake level measurements, and meteorological monitoring.
- Continue the Bottled Water Program.
- Submit preliminary responses to EPA comments, received on November 23, 2011, on the 2010 DSR. Pending discussions with EPA, complete revisions to specific text sections, figures and/or attachments, and submit the revised 2010 DSR.
- Continue data compilation associated with the revised Aquifer Test Work Plan, and submit a Data Summary Report.
- Continue the compilation of data for inclusion in the 2011 Annual Groundwater Monitoring Report and 2011 Annual Domestic Well Monitoring Report.
- Implement the 1Q 2012 groundwater monitoring and domestic well monitoring events, scheduled to start in February and March, respectively.
- Continue the compilation of information for inclusion in the revised Groundwater RI Work Plan.
- Remaining On-Site Monitor Well Program activities to be performed include: 1) the completion of drilling, logging, zonal sampling and well construction at the three background locations (B/W -56, -57 and -58) presented in the BGQA; 2) the completion of well development activities; 3) slug testing in all monitor wells; 4) survey all monitor wells; and 5) install dedicated pumps in all wells in advance of the 1Q 2012 groundwater monitoring event.
- Continue the aquifer solids testing program, including the submittal of SOPs to EPA.
- Provide preliminary responses to EPA and YPT comments on the draft BGQA, and discuss the comments with EPA and YPT.
- Briefly summarize, and submit to EPA, the results of utility investigations in select portions of the Process Areas (Sulfide Plant Truck Shop, Paint Shop). When available, review EPA's draft Process Areas (OU-3) RI Work Plan.
- When available, review EPA's draft data quality objectives for the Wabuska Drain (OU-7) RI Work Plan.

Please contact me at (714) 228-6774 or via e-mail at jack.oman@bp.com if you have any questions or comments about the January 2012 monthly report.

Sincerely,



Jack Oman
Project Manager

Attachments

cc: Dave Seter, EPA – via electronic mail
Roberta Blank, EPA – via electronic mail
Andrew Helmlinger, EPA – via electronic mail
Tom Dunkelman, EPA – via electronic mail
Greg Lovato, NDEP – via electronic mail
Tom Olsen, BLM – via electronic mail
Dan Newell, City of Yerington – via electronic mail
Phyllis Hunewill – via electronic mail
Virgil Arellano, Lyon County Commissioner – via electronic mail
Richard Faber, Lyon County Facilities Engineering – via electronic mail
Tom Grady, Nevada State Assembly – via electronic mail
Jim Sanford, MVEC – via electronic mail
Deborah Dunn, YPT – via electronic mail
Chairwoman Howard, YPT – via electronic mail
Dietrick McGinnis, McGinnis and Associates – via electronic mail
Tom Bowden, Ridolfi, Inc. – via electronic mail
Chairwoman McFalls, WRPT – via electronic mail
Vicky Moyle, WRPT – via electronic mail
Ron Halsey, Atlantic Richfield Company – via electronic mail
James Lucari, Atlantic Richfield Company – via electronic mail
Marc Ferries, Atlantic Richfield Company – via electronic mail
Brian Johnson, Atlantic Richfield Company – via electronic mail
John Batchelder, EnviroSolve – via electronic mail
Jim Chatham, Atlantic Richfield Company – via electronic mail
Rich Curley, Curley and Associates, LLC – via electronic mail
Bill Duffy, Davis Graham & Stubbs – via electronic mail
Tom Patton, Singatse Peak Services, LLP – via electronic mail
Steve Dischler, Singatse Peak Services, LLP – via electronic mail
George Eliopoulos, Singatse Peak Services, LLP – via electronic mail
Taurus Massey, Singatse Peak Services, LLP – via electronic mail
David Peri, Peri and Sons – via electronic mail
Ken Greene, CH2M Hill – via electronic mail
Victor Early, Tetra Tech – via electronic mail
Colin Lee, Tetra Tech – via electronic mail
Peggy Pauly, YCAG – via electronic mail
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